THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Edwin C. Kan et al.

Group Art Unit No. 2818

Application No.

10/718,662

Examiner:

Filed

November 24, 2003

For

Multibit Metal

Nanocrystal Memories

and Fabrication

## SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Pursuant to the provisions of 37 CFR 1.97 and 1.98, applicants hereby submit the documents listed on the attached PTO-1449B.

Copies of the cited publications are enclosed. Copies of the cited patents have not been included, but will be furnished upon request.

Respectfully submitted,

Edwin C. Kan et al. Applicant

JONES, TULLAR & COOPER, P.C.

Attorneys for Applicant

By: <u>{</u>

George M. Cooper

Reg/No. 20,201

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PTO/SB/08b(05-03)

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Approved for use through 04/30/2003. OMB 0651-0031

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TRADE Complete if Known Substitute for form 1449B/PTO **Application Number** 10/718,662 INFORMATION DISCLOSURE Filing Date November 24, 2003 STATEMENT BY APPLICANT **First Named Inventor** Edwin C. Kan 2818 Art Unit (Use as many sheets as necessary) **Examiner Name** Attorney Docket Number CRF D-2768D/Kan Sheet 3

NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²			
	1	"The Evolution of Dram Cell Technology," B. El-Kareh, G.B. Bronner; Solid State Technology, May 1997, Vol. 40, Issue 5	,			
)	2	"Fast and Long Retention-Time Nano-Crystal Memory," H.I. Hanafi, S. Tiwari, I. Khan; IEEE Transactions on Electron Devices, Vol. 43, No. 9, September 1996				
	3	"Charge-Trap Memory Device Fabricated by Oxidation of Si <sub>1-x</sub> Ge <sub>x</sub> ," Y-C King, T-J King, C. Hu; IEEE Transactions on Electron Devices, Vol. 48, No. 4, April 2001				
	4	"A Long-Refresh Dynamic/Quasi-Nonvolatile Memory Device with 2-nm Tunneling Oxide," Y-C King, T-J King, C. Hu; IEEE Electron Device Letters, Vol. 20, No. 8, August 1999				
	5	"NROM: A Novel Localized Trapping, 2-Bit Nonvolatile Memory Cell," B. Eitan, P. Pavan, I. Bloom, E. Aloni, A. Frommer, D. Finzi; IEEE Electron Device Letters, Vol. 21, No. 11, November 2000				
	6	"A Low Voltage SONOS Nonvolatile Semiconductor Memory Technology," M.H. White, Y. Yang, A. Purwar, M.L. French; IEEE Transactions on Components, Packaging, and Manuf. TechPart A, Vol. 20, No. 2,				
		June 1997				
	7	"High-Endurance Ultra-Thin Tunnel Oxide in MONOS Device Structure for Dynamic Memory Application," H.C. Wann, C. Hu; IEEE Electron Device Letters, Vol. 16, No. 11, November 1995				
· · · · · · · · · · · · · · · · · · ·	8	"Programming Characteristics of P-Channel Si Nano-Crystal Memory," K. Han, I. Kim, H. Shin; IEEE Electron Device Letters, Vol. 21, No. 6. June 2000				
	9	"A Novel, aerosol-nanocrystal floating-gate device for non-volatile memory applications," J. DeBlauwe, M. Ostraat, M.L. Green, G. Weber, T. Sorsch, A Kerber, F. Klemens, et al.; 2000 IEEE	,			

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Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
	10	"Single-Electron Devices and Their Applications," K.K. Likharev; Proceedings of the IEEE, Vol. 87, No. 4, April 1999				
	11	"Non-Volatile Si Quantum Memory with Self-Aligned Doubly-Stacked Dots," R. Ohba, N. Sugiyama, K. Uchida, J. Koga, A. Toriumi; IEEE 2000				
	12	"Modification of Indium Tin Oxide for Improved Hole Injection in Organic Light Emitting Diodes," Y. Shen, D.B. Jacobs, G.G. Malliaras, G. Koley, M.G. Spencer, A. Ioannidis; Adv. Mater, 2001, No. 16, 8/16				
	13	"Room Temperature Operation of a Quantum-Dot Flash Memory," J.J. Welser, S. Tiwari, S. Rishton, K.Y. Lee, Y. Lee; IEEE Electron Device Letters, Vol. 18, No. 6, June 1997				
	14	"Silicon Nano-Crystals Based MOS Memory and Effects of Traps on Charge Storage Characteristics," Y. Shi, S.L. Bu, X.L. Yuan, Y.D. Zheng: K. Saito, H. Ishikuro, T. Hiramoto; IEEE 1998				
	15	"A High Capacitive-Coupling Ratio (HiCR) Cell for 3 V-Only 64 Mbit and Future Flash Memories, "Y.S. Hisamune, K. Kanamori, T. Kubota, Y. Suzuki, M. Tsukiji, E. Hasegawa, A. Ishitani, T. Okazawa, IEEE 1993				
	16	"Volatile and Non-Volatile Memories in Silicon with Nano-Crystal Storage," S. Tiwari, F. Rana, K. Chan, H. Hanafi, W. Chan, D. Buchanan; 1995 IEEE				
	17	"Multilevel FLash cells and their Trade-offs," B. Eitan, R. Kazer- ounian, A. Roy; G. Crisenza, P. Cappelletti, A. Modelli; 1996 IEEE				
	· 18	U. of C., Berkely, CA				
	19	"A Four-State EEPROM Using Floating-Gate Memory Cells," C. Bleiker, H. Melchior; IEEE Journal of Solid-State Circuits, Vol. SC-22, No. 3, June 1987				

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	20	"A Multilevel Approach Toward Quadrupling the Density of Flash Memory," D.L. Kencke, R. Richart, S. Garg, S.K. Banerjee; IEEE Electron Device Letters, Vol. 19, No. 3, March 1998
	21	"Data Retention of a SONOS Type-Two-Bit Storage Flash Memory Cell," W.J. Tsai, N.K. Zous, C.J. Liu, C.C. Liu, C.H. Chen, T. Wang, S. Pan, C-Y Lu; S.H. Gu; 2001 IEEE
	22	"A Novel Approach to Controlled Programming of Tunnel-Based Floating-Gate MOSFET's," M. Lanzoni, L. Briozzo, B. Ricco; IEEE Jrnl. of Solid-State Circuits, Vol. 29, No. 2, February 1994
	23	"On the Universality of Inversion Layer Mobility in Si MOSFET's: Part I-Effects of Substrate Impurity Concentration," S-i Takagi, A. Toriumi, M. Iwase, H. Tango; IEEE Transactions on Electron Devices,
		Vol. 41, No. 12, December 1994
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